

IN THE CLAIMS:

Please CANCEL claims 2 and 20 without prejudice to or disclaimer of the recited subject matter.

Please AMEND claims 1, 3, 4, 6, 10, 11, 14, 16, 18, 21 and 23-29, and ADD new claims 30 and 31, as follows. A marked-up copy of the amended claims, showing the changes made thereto, is attached in Appendix A. For the Examiner's convenience, all claims currently pending in this application have been reproduced below:

Sub B-1
1. (Amended) An exposure apparatus for exposing a substrate using a master, said apparatus comprising:

- a stage being able to install a master;
- a first housing surrounding said stage;
- a second housing for stocking at least one of the masters, said second housing being allowed to communicate with said first housing; and
- a third housing being installed between an inside space and an outside space of said first housing, wherein a master is transferred to said first housing and is extracted from said first housing via said third housing,

wherein said first and second housings are filled by an inert gas or are adapted to be evacuated.

3. (Amended) The apparatus according to claim 1, wherein
said third housing includes a load-lock chamber, and
said apparatus further comprises first opening/closing means between the outside
of said first housing and said load-lock chamber, and second opening/closing means between
said load-lock chamber and the inside of said first housing.

4. (Amended) The apparatus according to claim 3, wherein in transferring the master
from the outside to the inside of said first housing, said first opening/closing means is opened,
the master is transferred from the outside of said first housing to the load-lock chamber, said first
opening/closing means is closed, the load-lock chamber is controlled to a predetermined
atmosphere, said second opening/closing means is opened, and the master is transferred to the
inside of said first housing.

5. The apparatus according to claim 1, wherein said second housing is arranged in
said first housing.

6. (Amended) The apparatus according to claim 1, wherein said second housing is
arranged outside said first housing and contacts said first housing.

7. The apparatus according to claim 6, wherein said second housing comprises third
opening/closing means between said first housing and said second housing.

8. The apparatus according to claim 1, wherein said second housing has a shelf-like structure and can stock a plurality of masters.

9. The apparatus according to claim 1, wherein an atmosphere in said first housing is detected, and controlled in accordance with a detection result.

10. (Amended) The apparatus according to claim 1, wherein said first housing incorporates:

alignment means for aligning the master;

first transfer means for transferring the master between said third housing and said second housing and between said second housing and said alignment means; and

second transfer means for transferring the master between said alignment means and the exposure position.

11. (Amended) The apparatus according to claim 1, wherein said first housing has exposure beam transmission ports above and below an exposure position.

12. The apparatus according to claim 1, wherein the predetermined atmosphere includes an inert gas atmosphere.

13. The apparatus according to claim 12, wherein the atmosphere is controlled by a circulation system via cleaning means.

14. (Amended) The apparatus according to claim 12, wherein inert gas for forming the predetermined atmosphere is supplied to an exposure position.

15. The apparatus according to claim 12, wherein inert gas for forming the predetermined atmosphere is supplied to a vicinity of said second housing in said first housing.

16. (Amended) The apparatus according to claim 1, wherein the predetermined atmosphere includes a vacuum.

17. The apparatus according to claim 1, wherein an exposure light source includes an F₂ excimer laser.

18. (Amended) An exposure apparatus for exposing a substrate using a master, said apparatus comprising:

a stage being able to install a master;

a first housing surrounding said stage;

a second housing for stocking at least one of the masters, said second housing being allowed to communicate with said first housing;

a third housing being installed between an inside space and an outside space of said first housing, wherein a master is transferred to said first housing and is extracted from said first housing via said third housing;

a display;

a network interface; and

a computer for executing network software,

wherein said first and second housings are filled by an inert gas or are adapted to be evacuated, and maintenance information of the exposure apparatus is communicated via a computer network.

19. The apparatus according to claim 18, wherein the network software provides on said display a user interface for accessing a maintenance database provided by a vendor or user of the exposure apparatus and connected to an external network outside a factory in which the exposure apparatus is installed, and information is obtained from the database via the external network.

21. (Amended) A semiconductor device manufacturing method comprising the steps of:
installing, in a semiconductor manufacturing factory, manufacturing apparatuses, including an exposure apparatus, for performing various processes; and
manufacturing a semiconductor device by performing a plurality of processes, using the manufacturing apparatuses,

wherein the exposure apparatus has:

- (i) a stage for holding a master;
- (ii) a first housing for surrounding the stage,
- (iii) a second housing for stocking at least one of the masters, the second

housing being able to communicate with the first housing, and

(iv) a third housing installed between an inside space and an outside space the first housing, wherein a master is transferred to said first housing and is extracted from said first housing via said third housing, and

the first and second housings are filled by an inert gas or are adapted to be evacuated.

22. The method according to claim 21, further comprising steps of:

connecting the manufacturing apparatuses via a local area network; and

communicating information about at least one of the manufacturing apparatuses between the local area network and an external network outside the semiconductor manufacturing factory.

23. (Amended) The method according to claim 22, further comprising performing one of

(i) accessing a database provided by a vendor or user of the exposure apparatus via the external network, thereby obtaining maintenance information of the exposure apparatus by data communication, and (ii) performing data communication between the semiconductor

manufacturing factory and another semiconductor manufacturing factory via the external network, thereby performing production management.

24. (Amended) A semiconductor manufacturing factory comprising:

manufacturing apparatuses, including an exposure apparatus, for performing various processes;

a local area network for connecting said manufacturing apparatuses; and

a gateway for allowing access to an external network outside the factory from said local area network,

wherein information about at least one of said manufacturing apparatuses can be communicated, and

the exposure apparatus has:

- (i) a stage for holding a master;
- (ii) a first housing for surrounding the stage,
- (iii) a second housing for stocking at least one of the masters, the second housing being able to communicate with the first housing, and
- (iv) a third housing installed between an inside space and an outside space the first housing, wherein a master is transferred to said first housing and is extracted from said first housing via said third housing, and

the first and second housings are filled by an inert gas or are adapted to be evacuated.

25. (Amended) A maintenance method for an exposure apparatus installed in a semiconductor manufacturing factory, said method comprising steps of:

making a vendor or user of the exposure apparatus provide a maintenance database connected to an external network outside the semiconductor manufacturing factory;

allowing access to the maintenance database from the semiconductor manufacturing factory via the external network; and

transmitting maintenance information accumulated in the maintenance database to the semiconductor manufacturing factory via the external network,

wherein the exposure apparatus has:

- (i) a stage for holding a master;
- (ii) a first housing for surrounding the stage,
- (iii) a second housing for stocking at least one of the masters, the second

housing being able to communicate with the first housing, and

(iv) a third housing installed between an inside space and an outside space of the first housing, wherein a master is transferred to said first housing and is extracted from said first housing via said third housing, and

the first and second housings are filled by an inert gas or are adapted to be evacuated.

26. (Amended) An exposure apparatus for exposing a substrate using a master, said apparatus comprising:

a stage being able to install a master;

a first housing for surrounding said stage; and

a second housing for stocking at least one of the masters, said second housing being inside of said first housing,

wherein interiors of said first and second housings are filled by an inert gas or are adapted to being evacuated.

27. (Amended) An exposure apparatus for exposing a substrate using a master, said apparatus comprising:

a stage being able to install a master;

a first housing for surrounding said stage; and

a second housing for stocking at least one of the masters, said second housing being allowed to communicate with said first housing,

wherein the interiors of said first and second housings are filled by an inert gas or are adapted to be evacuated.

28. (Amended) A semiconductor device manufacturing method comprising steps of:
installing, in a semiconductor manufacturing factory, manufacturing apparatuses,
for performing various processes, including an exposure apparatus for exposing a substrate to a
pattern of a mask; and

manufacturing a semiconductor device by performing a plurality of processes
using the manufacturing apparatuses,

wherein the exposure apparatus has:

a stage being able to install a master;

a first housing for surrounding said stage; and

a second housing for stocking at least one of the masters, the second housing
being allowed to communicate with the first housing,

wherein interiors of said first and second housings are filled by an inert gas or are
adapted to be evacuated.

29. (Amended) A semiconductor device manufacturing method comprising steps of:
installing, in a semiconductor manufacturing factory, manufacturing apparatuses,
for performing various processes, including an exposure apparatus for exposing a substrate to a
pattern of a mask; and

manufacturing a semiconductor device by performing a plurality of processes
using the manufacturing apparatuses,

wherein the exposure apparatus has:

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a stage being able to install a master;
a first housing for surrounding said stage; and
a second housing for stocking at least one of the masters, said second housing
being allowed to communicate with an interior of said first housing,
wherein the interiors of said first and second housings are filled by an inert gas or
are adapted to be evacuated.

[Please ADD new claims 30 and 31 as follows:]

-- 30. An exposure apparatus for exposing a substrate to a master, said apparatus
comprising:

a stage being able to install a master;
a first housing for surrounding said stage;
a second housing for stocking at least one of the masters, wherein said second
housing is able to communicate with said first housing; and
a third housing installed between an inside space and an outside space of said first
housing, wherein a master is transferred to said first housing and is extracted from said first
housing via said third housing, wherein said first and second housings are filled by an inert gas or
are adapted to be evacuated,
wherein the master transferred to said first housing via said third housing is
installed in said second housing.

31. An exposure method for transferring a pattern on a master to a substrate via an optical system using an exposure apparatus, said method comprising the steps of:

providing the exposure apparatus, which has:

- (i) a stage for holding a master;
- (ii) a first housing for surrounding the stage;
- (iii) a second housing for stocking at least one of the masters, wherein the

second housing is able to communicate with the first housing; and

(iv) a third housing installed between an inside space and an outside space of the first housing, wherein a master is transferred to the first housing and is extracted from the first housing via the third housing,

wherein the first and second housings are filled by an inert gas or are adapted to be evacuated,

a supplying step of supplying an inert gas to the first and second housings;

a stocking step of stocking a master in the second housing via a third housing;

an installation step of installing a master on the stage, which is stocked in the second housing in said stocking step; and

an exposure step of exposing the substrate using a master installed on the stage in said installation step.--